

REMARKS

It is respectfully requested that the Office enter the above claim amendments and following remarks before considering the RCE filed concurrently herewith. Claims 1-22 are currently pending in this application. Reconsideration is respectfully requested in light of the above claim amendments and the following remarks.

The Examiner maintains the previous rejection of claims 1, 2, 4, 6, 7, 15-19 and 22 under 35 U.S.C §102(e) as being anticipated by U.S. Patent 6,195,584 to Hill et al. Applicants respectfully traverse this rejection.

Applicants' claimed invention as recited in independent claims 1, 15, 19 and 22 is directed towards a method and corresponding apparatus for determining displacement of an electrode. For example independent claim 1 recites a method comprised in part by delivering an electrical signal to a first position using a first electrode located in or adjacent to a first cardiac chamber... sensing a potential generated by the delivered electrical signal using a second electrode located at a second position in or adjacent to a second cardiac chamber and determining an inter-electrode spacing between the first electrode and the second electrode based, at least in part, on the sensed potential. (Underlining added for emphasis only). Applicants respectfully submit that Hill et al. do not disclose or suggest the recited claim elements.

Rather, Hill et al. disclose a system and method for detecting atrial lead dislodgment at a heart tissue/pacing lead interface not the displacement i.e. distance the electrode in one chamber moves in response to an excitation in another chamber as recited in the claimed invention. More specifically, Hill et al. pace the atrium in a test mode that employs high energy atrial pacing pulses. In the test mode the device of Hill et al. measures PR intervals between the high energy atrial pacing pulses and corresponding sensed ventricular depolarizations. The device of Hill et al. then determines that the atrial electrode is mis-located responsive to the occurrence of a threshold number of short PR intervals or that the atrial electrode is appropriately located responsive to the occurrence of a threshold number of long PR intervals. (see Abstract).

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Thus, Hill et al. detect dislodgement of the atrial electrode (i.e. the first electrode of the claimed invention) in accordance with changes in the interval between the paced atrial events (i.e. pulses in the first chamber) and corresponding ventricular events as detected by a ventricular electrode (i.e. the second electrode of the claimed invention.) Hill et al. do not disclose or in any way suggest delivering an electrical signal to a first position using a first electrode located in or adjacent to a first cardiac chamber... and sensing a potential generated by the delivered electrical signal using a second electrode located at a second position in or adjacent to a second cardiac chamber and determining an inter-electrode spacing between the first electrode and the second electrode (i.e. the ventricular electrode of Hill et al.) based, at least in part, on the sensed potential as recited in the claimed invention.

Accordingly, Applicants respectfully submit that claims 1, 15, 19 and 22 are novel and non-obvious over Hill et al. and are allowable. Applicants further submit that claims 2, 4, 6 and 7 and claims 16-18 that depend from claims 1 and 15 respectively are allowable as are claims 1 and 15 and for additional limitations recited therein.

The Examiner rejected claims 3, 5, 20 and 21 under 35 U.S.C §103(a) as being unpatentable over Hill et al. Applicants respectfully traverse this rejection.

In view of the foregoing analysis of independent claims 1, 15 and 19 over Hill et al., Applicants believe that the rejections of dependent claims 3, 5, 20 and 21 under §103 is rendered moot as claims 3, 5, 20 and 21 depend from allowable independent claims 1, 15 and 19 respectively. Applicant, therefore, requests withdrawal of the rejection of claims 3, 5, 20 and 21 under 35 U.S.C. § 103(a).

The Examiner rejected claims 8 and 9 under 35 U.S.C §103(a) as being unpatentable over Hill et al. in view of U.S. 4,173,230 to Digby and claims 10-14 under 35 U.S.C §103(a) as being unpatentable over Hill et al. in view of U.S. Publication 2003/0204212 to Burnes et al. Applicants respectfully traverse these rejections.

In view of the foregoing analysis of independent claim 1 over Hill et al., Applicants believe that the rejections of dependent claims 8, 9 and 10-14 under §103 is rendered moot as claims 8, 9 and 10-14 depend from allowable independent claim 1.

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Applicant, therefore, requests withdrawal of the rejection of claims 8, 9 and 10-14 under 35 U.S.C. § 103(a).

In light of the above claim amendments and remarks, it is respectfully submitted that the application is in condition for allowance, and an early notice of allowance is requested.

Respectfully submitted,

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Date


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